

We Claim:

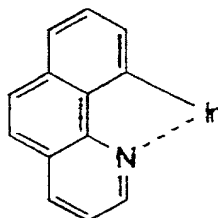
1. A light-emitting material comprising a compound having a partial structure represented by the following formulae (1) to (10), (21), (22), or tautomer thereof:

5



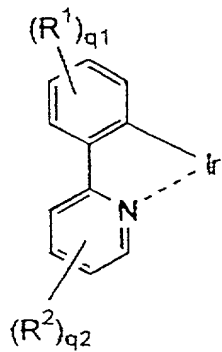
(1)

10



(2)

15



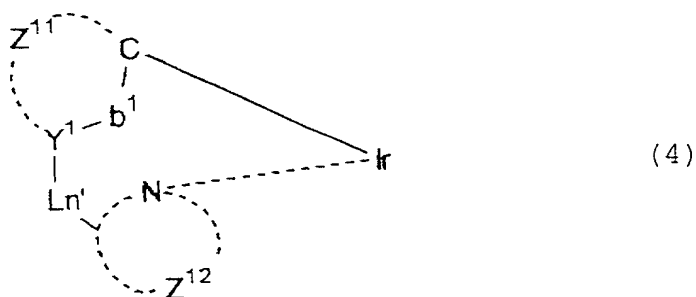
(3)

20

25

wherein R^1 and R^2 each represent a substituent; and q^1 and q^2 each represent an integer of from 0 to 4, with the proviso that the sum of q^1 and q^2 is 1 or more,

5



10

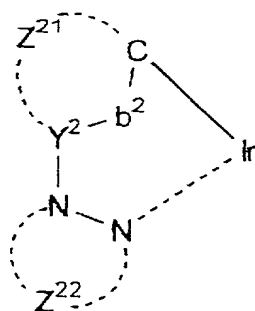
wherein Z^{11} and Z^{12} each represent a nonmetallic atom group required to form a 5- or 6-membered ring with at least one of carbon atom and nitrogen atom, said ring optionally having a substituent or forming a condensed ring with the other ring; Ln^1 represents a divalent group; Y^1 represents a nitrogen atom or carbon atom; and b^1 represents a single bond or double bond,

15



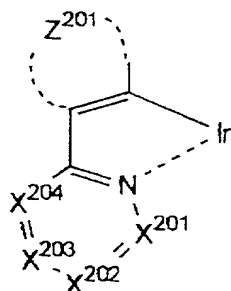
20





(7)

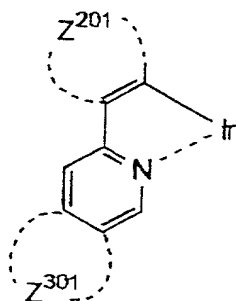
wherein Z^{21} and Z^{22} each represent a nonmetallic atom group required to form a 5- or 6-membered ring with at least one of carbon atom and nitrogen atom, said ring optionally having a substituent or forming a condensed ring with the other ring; Y^2 represents a nitrogen atom or carbon atom; and b^2 represents a single bond or double bond,



(8)

wherein X^{201} , X^{202} , X^{203} and X^{204} each represent a nitrogen atom or C-R and forms a nitrogen-containing heteroaryl 6-membered ring with $-C=N-$, with the proviso that at least one of X^{201} , X^{202} , X^{203} and X^{204} represents a nitrogen atom; R represents a hydrogen atom or substituent; and Z^{201} represents an atomic group for forming an aryl or heteroaryl ring,

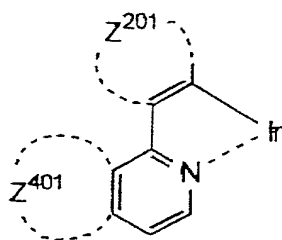
5



(9)

wherein Z^{201} and Z^{301} each represent an atomic group for forming an aryl or heteroaryl ring,

10

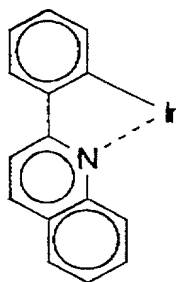


(10)

15

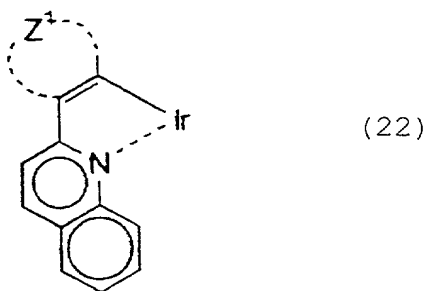
wherein Z^{201} and Z^{401} each represent an atomic group for forming an aryl or heteroaryl ring,

20



(21)

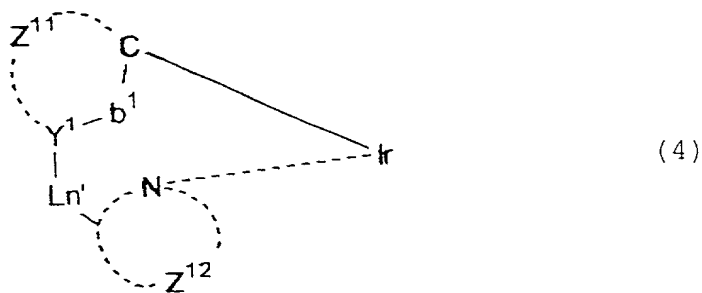
25



wherein Z^1 represents an atomic group which forms a heteroaryl ring.

2. The light-emitting material according to claim 1, which comprises the compound represented by the formula (21) or (22), wherein said quinoline derivative ligand is formed by at least four rings.

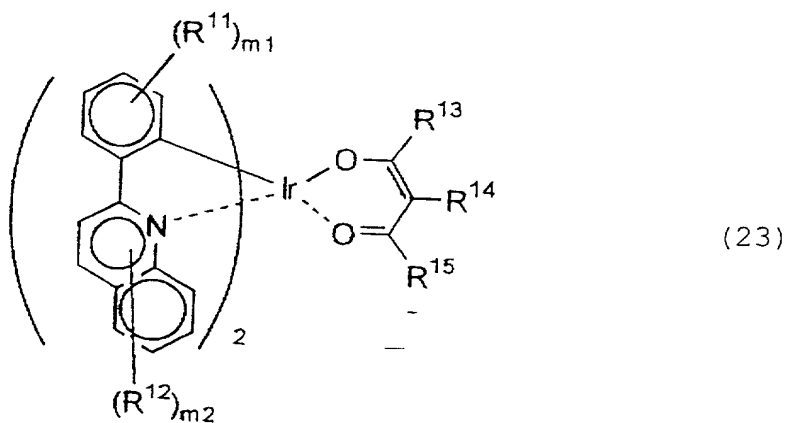
3. A compound having a partial structure represented by the following formula (4) or a tautomer thereof:



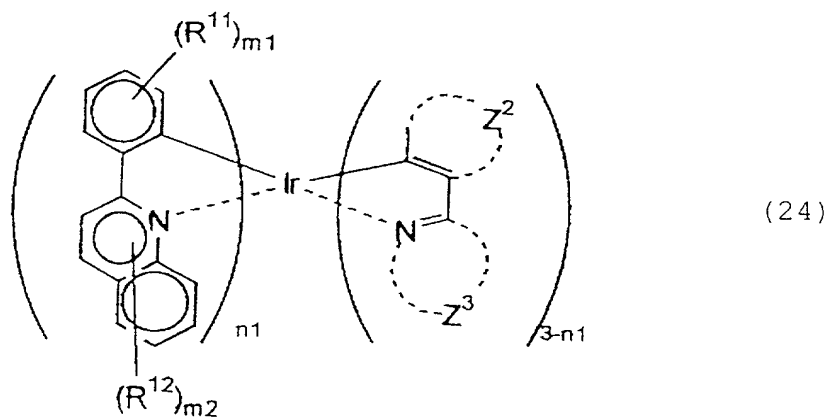
wherein Z^{11} and Z^{12} each represent a nonmetallic atom group required to form a 5- or 6-membered ring with carbon atom and/or nitrogen atom, said ring optionally having a substituent or

forming a condensed ring with the other ring; Ln^1 represents a divalent group; Y^1 represents a nitrogen atom or carbon atom; and b^1 represents a single bond or double bond.

4. A compound represented by the following formula (23) or (24):

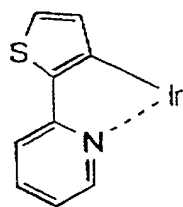


wherein R^{11} and R^{12} each represent a substituent; R^{13} , R^{14} and R^{15} each represent a hydrogen atom or substituent; m^1 represents an integer of from 0 to 4; and m^2 represents an integer of from 0 to 6,

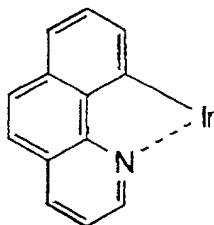


wherein R^{11} and R^{12} each represent a substituent; m^1 represents an integer of from 0 to 4; m^2 represents an integer of from 0 to 6; Z^2 represents an atomic group which forms an aryl or heteroaryl ring; Z^3 represents an atomic group which forms a nitrogen-containing heteroaryl ring; and n^1 represents an integer of from 1 to 3.

5. An organic light-emitting device comprising a light-emitting layer or a plurality of thin organic compound layers containing a light-emitting layer formed interposed between a pair of electrodes, wherein at least one layer comprises a light-emitting material having a partial structure represented by the following formula (1) to (10), (21), (22) or a tautomer thereof:

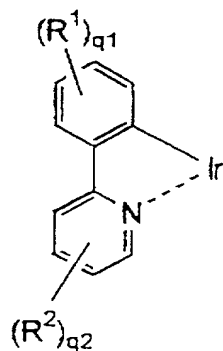


(1)



(2)

5

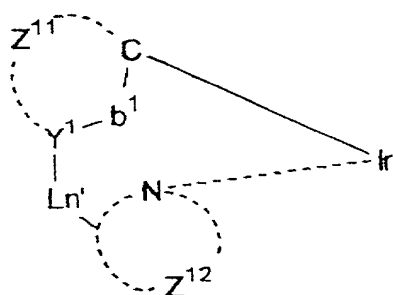


(3)

10

wherein R^1 and R^2 each represent a substituent; and q^1 and q^2 each represent an integer of from 0 to 4, with the proviso that the sum of q^1 and q^2 is 1 or more,

15



(4)

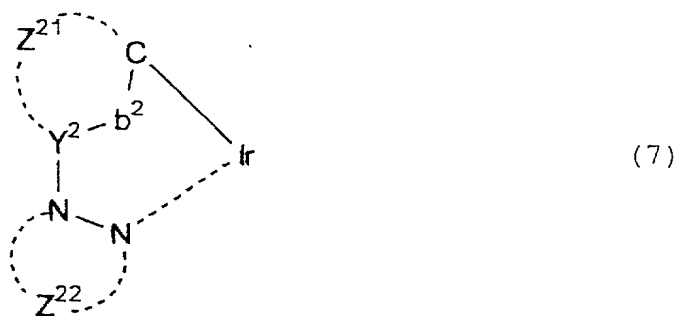
20

wherein Z^{11} and Z^{12} each represent a nonmetallic atom group required to form a 5- or 6-membered ring with at least one of carbon atom and nitrogen atom, said ring optionally having a substituent or forming a condensed ring with the other ring; Ln^1 represents a divalent group; Y^1 represents a nitrogen atom or carbon atom; and b^1 represents a single bond or double bond,

25



5

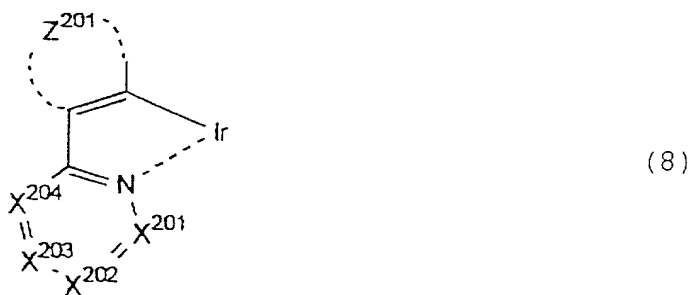


10

wherein Z^{21} and Z^{22} each represent a nonmetallic atom group required to form a 5- or 6-membered ring with at least one of carbon atom and nitrogen atom, said ring optionally having a substituent or forming a condensed ring with the other ring; Y^2 represents a nitrogen atom or carbon atom; and b^2 represents a single bond or double bond,

15

20

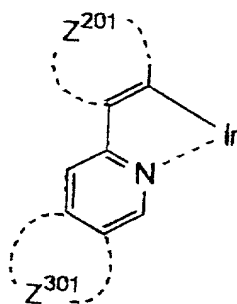


wherein X^{201} , X^{202} , X^{203} and X^{204} each represent a nitrogen atom or C-R and forms a nitrogen-containing heteroaryl 6-membered

25

ring with $-C=N-$, with the proviso that at least one of X^{201} , X^{202} , X^{203} and X^{204} represents a nitrogen atom; R represents a hydrogen atom or substituent; and Z^{201} represents an atomic group for forming an aryl or heteroaryl ring,

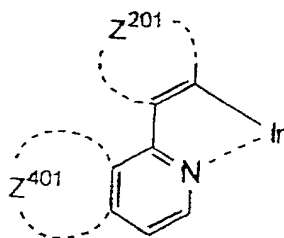
5



(9)

wherein Z^{201} and Z^{301} each represent an atomic group for forming an aryl or heteroaryl ring,

15

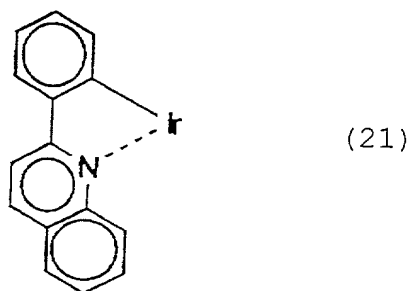


(10)

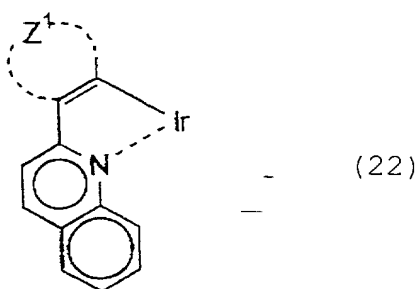
20

wherein Z^{201} and Z^{401} each represent an atomic group for forming an aryl or heteroaryl ring,

5



10



15 wherein Z^1 represents an atomic group which forms a heteroaryl ring.

20 6. An organic light-emitting device according to claim 5, wherein at least one layer consists essentially of the light-emitting material.

7. The light-emitting device according to Claim 5, wherein said layer comprising the light-emitting material is formed by a coating process.

25

8. An organic light-emitting device comprising a light-emitting layer or a plurality of thin organic compound layers containing a light-emitting layer formed interposed between a pair of electrodes, wherein at least one layer
5 contains an orthometalated iridium complex, and said layer containing an orthometalated iridium complex is formed by a coating process.

9. An organic light-emitting device having an external
10 quantum efficiency of 5% or more, and a λ_{max} of light emitting of 590 nm or more.